

AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions and listings of claims in the application:

LISTING OF CLAIMS:

1. (currently amended) ~~An~~ Optical transmission system with a transmitter function, a transmission line, and a receiver function where each channel has its optical spectrum truncated by a filter function according to a vestigial side-band method,

the transmitter function comprising ~~with~~ modulators and a wavelength multiplexer for either equidistant or non-equidistant channel spacing;

the receiver function comprising a wavelength demultiplexer, and electrical receivers;

the filter function comprising a first filter and a second filter, the second filter having a transmission response with maximum transmission at the central wavelength of the channel, and the first filter ~~has~~ having a transmission response with maximum transmission in the relevant sideband of said WDM channel, ~~and the filters are~~ being tunable.

2. (currently amended) ~~The~~ Transmission system according to claim 1, wherein the two filters are tunable with changes of the maximum distance between them.

3. (currently amended) ~~The~~ Transmission system according to claim 1, wherein the transmission maxima of the first and the second filters ~~is~~ are about 15 GHz apart from each others.

4. (currently amended) ~~The~~ Transmission system according to claim 1, wherein the first and the second filter are fiber Bragg grating filters with a common support device.

5. (currently amended) ~~The~~ Transmission system according to claim 1, wherein the first and the second filter are Fabry Perot Filters.

6. (currently amended) ~~The~~ Transmission system according to claim 1, wherein the first and the second filter are structures in a planar lightwave circuit.

7. (currently amended) A ~~M~~method for optimization of bit error rate in a VSB-WDM transmission system comprising ~~the steps~~:

~~T~~Transmitting coded optical signals over a transmission line;

~~D~~Demultiplexing the WDM channel wavelengths;

~~F~~Filtering the sideband of the channel wavelengths;

~~and additionally~~:

~~F~~Filtering with two parallel aligned filters where the first filter is filtering the sideband and the second filter is filtering the carrier wavelength;

~~A~~Aadjusting the second filter exactly on the channel wavelength by a feed back loop; and

~~M~~Maintaining the distance between the maxima of the two filters.